

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Originally filed claims 1 - 17 have been canceled, and newly added claims 18-34 have been added. The Examiner is respectfully requested to reconsider the rejection of the present application in view of the amendments and remarks as set forth hereinbelow.

Drawings

The Examiner has not acknowledged that the formal drawings filed on July 24, 2000 have been accepted. The applicants respectfully request that the Examiner acknowledge the acceptance of the drawings in the next communication.

Claim for Priority

It is gratefully acknowledged that the Examiner has recognized the Applicant's claim for foreign priority. In view of the fact that the Applicants claim for foreign priority has been perfected, no additional action is required from the Applicants at this time.

Acknowledgement of Information Disclosure Statement

The Examiner has acknowledged that the Information Disclosure Statement filed on April 4, 2002 has been initialed and considered by the Examiner. An initialed copy of the PTO-1449 Form has been received from the Examiner. No further action is necessary at this time.

Rejection of Claims 1 - 17 under 35 U.S.C. § 102(a)

The Office Action has rejected claims 1 - 17 under the provisions of 35 U.S.C. § 102 (a) as being anticipated by an article entitled "OFDM-CDMA with Peak Power Reduction Based on the Spreading Sequences" by Ochiai et al., IEEE International Conference on Communications, June 7-11, 1998, pages 1299-1303, vol. 13. The Applicants respectfully submit that newly presented claims 18-34 are not anticipated by the Ochiai article.

Newly presented claim 18 is directed to an improved method for assigning one or more spreading sequences to a user in a MC-CDMA transmission network. Instead of spreading the information in the time domain as in a direct sequence CDMA technique, the MC-CDMA spreading is performed in the frequency domain. MC-CDMA transmission systems use spreading sequences to reduce the

interference between signals transmitted to users of the network. The invention of claim 18 further reduces the interference between signals by assigning a spreading sequence to a user based upon a minimization function which minimizes the interference between the assigned spreading sequence assigned to the user and the other spreading sequences assigned by the transmitter.

The Ochiai et al. article relates to a OFDM-CDMA or MC-CDMA system which utilizes a plurality of spreading sequences. The Ochiai et al. article discloses the use of Walsh-Hadamard ("WH") sequences and complementary ("CP") sequences. The objective of the system disclosed in the Ochiai et al. article is to reduce the probability of exceeding the peak average power ratio and to choose the signal with the smallest peak average power ratio before transmission. (See page 1301, second column).

The Office Action alleges that the Ochiai et al. article discloses in section "B." on pages 1301-1302, a cost function representing the interference between the spreading sequence code and a plurality of spreading sequence codes belonging to a set. The Applicants respectfully disagree. The Ochiai et al. article discloses bit error performance degradation due to erroneous side information. (See page 1302, column 1). There is

no teaching, showing or suggestion in the Ochiai et al. article that bit error performance degradation is due to the interference between a spreading sequence assigned to a user and the set of spreading sequences used at the transmitter, nor does Ochiai et al. disclose any technique for solving the problem. Accordingly, it is respectfully submitted that the Ochiai et al. article does not anticipate the invention of claim 18.

It is respectfully submitted that claims 19-33 are allowable for at least the same reasons as claim 18 upon which claims 19-33 depend.

It is also respectfully submitted that claim 34, which is an apparatus claim that corresponds to claim 18, is allowable for at least the same reasons as claim 18.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance and such allowance is respectfully solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact McGrath, Richard J. (Reg. No. 29,195), to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant respectfully petitions for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$110.00 is attached hereto.

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required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: 

Michael K. Mutter

Reg. No. 29,680


MKM/RJM/kmr
(703) 205-8000
0054-0215P

P.O. Box 747
Falls Church, VA 22040-0747
703-205-8000

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